AMENDMENTS TO THE SPECIFICATION

The specification is amended as follows:

The last paragraph beginning on page 22 and ending on page 23 is amended as follows:

Separate from the above-described method, an actuator can detect a change of acoustic impedance of a liquid by employing only a change of resonance frequency. As a method of utilizing a change of acoustic impedance of a liquid, there is a method that, in the case where resonance frequency is detected by measuring a counter electromotive force generated by a residual oscillation remaining in an oscillating section after oscillating the oscillating section of an actuator, a piezoelectric element can be utilized. A piezoelectric element is an element for generating a counter electromotive force by residual oscillation remaining in an oscillating section of the actuator, a largeness of a counter electromotive force by an amplitude of the oscillating section of the actuator. Therefore, the larger the amplitude of the oscillating section of the actuator is, the easier it is detected. Moreover, a cycle of changing the largeness of counter electromotive force is changed by frequency of the residual oscillation in the oscillating section of the actuator. Therefore, a frequency of the oscillating section of the actuator corresponds to a frequency of a counter electromotive force. By the way, resonance frequency is referred to a frequency in resonance state of the oscillating section of the actuator and the medium contacted with the oscillating section.